

REMARKS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the above amendments and the following remarks.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-34 remain pending in this application. In response to an earlier restriction requirement, claims 26-34 (Group III) were elected for examination on the merits. Accordingly, claims 1-25 have been withdrawn from consideration. Claims 26-34 are hereby amended.

The Office Action states that an Information Disclosure Statement (IDS) filed on August 20, 2004, fails to comply with 37 C.F.R. 1.98(a)(2) on the basis that several foreign patent documents filed with the IDS were not legible. In compliance with 37 C.F.R. 1.98(a)(2), Applicant has hereto attached legible copies of the foreign patent documents initially submitted with the August 20, 2004 IDS.

II. THE REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 26, 28, 29, and 32-34 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,468,043 to Benvenuti ("*Benvenuti*") in view of U.S. Patent No. 5,269,898 to Welty ("*Welty*") and U.S. Patent No. 3,625,848 to Snaper ("*Snaper*"). Dependant claim 27 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Benvenuti* in view of *Welty*, *Snaper*, and Naidu et al. ("*Naidu*"). Also, dependant claim 30 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Benvenuti* in view of *Welty*, *Snaper*, and U.S. Patent No. 5,688,416 to Johnson ("*Johnson*"). Finally, dependant claim 31 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Benvenuti* in view of *Welty*, *Snaper*, and

U.S. Patent No. 5,932,078 to Beers et al. ("*Beers*"). The rejections are traversed for at least the following reasons.

Claim 26, recites, *inter alia*:

"A method for the production of a coating comprising a non-vaporizing getter metal alloy on an inner wall of a high-vacuum vessel to be coated ... **continuing conversion of the cathode wire into a getter metal alloy plasma while maintaining a metal plasma light arc between the cathode wire and a cage-shaped anode member spatially surrounding the cathode wire**"(Emphasis added)

Applicant respectfully submits that neither *Benvenuti*, *Welty*, or *Snaper*, taken alone or in combination, discloses or suggests "continuing conversion of the cathode wire into a getter metal alloy plasma while maintaining a metal plasma light arc between the cathode wire and a cage-shaped anode member spatially surrounding the cathode wire," as recited in claim 26.

In *column 4, lines 19-45*, *Benvenuti* discloses a non-evaporable getter to create a high vacuum in a chamber (1) defined by a metal wall capable of releasing gas at its surface. The process includes the following stages. A chamber (1) is cleaned and a thin coating deposition device is inserted into the chamber (1). A relative vacuum is created in the chamber (1), where the chamber (1) is dehydrated so as to remove the greatest possible part of the water vapour. The getter is then deposited in a thin coating over at least the greater part of the surface of the wall defining the chamber (1). Atmospheric pressure is re-established in the chamber (1) and the deposition device is extracted from the chamber (1). The chamber (1) internally coated with the thin getter coating is assembled within the installation which it is to equip and a relative vacuum is created. The installation is then dehydrated at the required temperature while maintaining the chamber at a temperature lower than the activation temperature of the getter. Dehydration of the chamber is stopped and simultaneously the temperature of the chamber is raised to the getter

activation temperature which is maintained for a predetermined period (for example 1 to 2 hours). Lastly the temperature of the chamber is brought back to room temperature. *Benvenuti's* described process does *not* therefore disclose or suggest “continuing conversion of the cathode wire into a getter metal alloy plasma while maintaining a metal plasma light arc between the cathode wire and a cage-shaped anode member spatially surrounding the cathode wire,” as recited in claim 26.

Column 6, lines 42-50 of Welty describes an apparatus and method for depositing a coating onto a substrate using vacuum arc evaporation from a substantially cylindrical cathode. Referring now to Fig. 2A, a rod-shaped cathode (1) mounted within a vacuum chamber (2) serves as an anode. Cathode 1 is connected to the negative output of an arc power supply (3), and the vacuum chamber 2 is connected to the positive output of arc power supply (3). An arc is struck repetitively by a striker (11), located at the end of cathode 1 that is opposite the connection to arc power supply 3. A helical electromagnet coil (4) is mounted coaxially with the cathode 1 and serves to generate a solenoidal magnetic field with flux lines substantially parallel to the cathode axis, and having a magnitude proportional to the current furnished by a coil power supply (6). *Welty, col. 5, line 63 through col. 6, line 7*. The pitch of the electromagnet coil (4) and the diameter of the conductor from which it is fabricated are chosen to minimize the blockage of material evaporated from cathode (1). *Welty, col. 6, lines 29-32*. Referring to Fig. 2B, the electromagnet coil (4) is connected in series with the arc power supply (3) so that the arc current flows through electromagnet coil (4) to generate the axial magnetic field. This arrangement eliminates the necessity of a separate power supply for powering electromagnet coil (4), but sacrifices independent adjustability of the strength of the applied magnetic field except through selection of the pitch of electromagnet coil (4). *Welty's* helical electromagnet coil (4)

mounted coaxially with the cathode (1) for generating a solenoidal magnetic field *also* does *not* disclose of suggest “continuing conversion of the cathode wire into a getter metal alloy plasma while maintaining a metal plasma light arc between the cathode wire and a cage-shaped anode member spatially surrounding the cathode wire,” as recited in claim 26.

In *column 3, lines 9-23 of Snaper*, a beam gun capable of operating in a region above “point B” in Fig. 1 causes an arc discharge that emits source atoms and ions capable of being deposited onto a base structure. In the case of a metallic source material, the cathode is constructed of such a source material. A rapidly moving spot on the cathode caused by high current and arc discharge generates a directed beam of high-energy atoms and ions with kinetic energies in the range of about 10-100 electron volts. The high-energy atoms and ions are capable of forming thin films and coatings on base or substrate structures, and the flux intensity of the beam is sufficient to provide deposition rates at an order of magnitude higher than that capable by sputter deposition methods. As with *Benvenuti* and *Welty*, *Snaper’s* beam gun, which causes an arc discharge that emits source atoms and ions, also *fails* to disclose of suggest “continuing conversion of the cathode wire into a getter metal alloy plasma while maintaining a metal plasma light arc between the cathode wire and a cage-shaped anode member spatially surrounding the cathode wire,” as recited in claim 26

The relied upon portion of *Benvenuti*, *Welty*, and *Snaper’s* do not disclose or suggest the above identified feature of claim 26. Therefore, for at least the foregoing reasons, Applicant submits that independent claim 26 is patentable. Reconsideration and withdrawal of this rejection is, therefore, respectfully requested.

IV. DEPENDENT CLAIMS

The other claims are dependent from independent claim 26, discussed above, and are therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

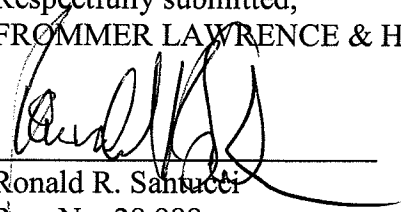
In view of the foregoing, it is believed that all of the claims in this application are patentable over the prior art, and an early and favorable consideration thereof is solicited.

Statements appearing above with respect to the disclosures in the cited references represent the present opinions of the Applicant's undersigned attorney and, in the event that the Examiner disagrees with any such opinions, it is respectfully requested that the Examiner specifically indicate those portions of the respective reference providing the basis for a contrary view.

Please charge any fees incurred by reason of this response and not paid herewith to Deposit Account No. 50-0320.

Respectfully submitted,
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